



# Electronics & ICT Academy IIT Roorkee



An Initiative of  
**Ministry of Electronics  
& Information  
Technology (MeitY)**  
Government of India

## A Faculty Development Program on

## Big Data Analytics

In association with

**Babu Banarasi Das University,  
Lucknow**

**July 21 – July 25, 2025**

**Register Before:** July 20, 2025



Venue: Hybrid Mode at BBD University  
Lucknow

### Objectives of the Course

- To equip participants with practical knowledge of Python for data processing and analysis.
- To introduce core concepts of Big Data, Hadoop, and distributed computing.
- To develop familiarity with Apache Spark and PySpark for scalable data analytics.
- To expose participants to data visualization tools and techniques.
- To demonstrate the use of cloud platforms for deploying Big Data applications.



### Why this course ?

This FDP has been designed to bridge that gap by providing participants with both foundational understanding and practical skills in Big Data technologies. Through a combination of expert-led lectures and hands-on lab sessions, the course offers a unique opportunity to gain experience in working with real-world tools and platforms. Participants will learn to harness the power of Python for data handling, use Apache Hadoop for distributed computing, and apply Apache Spark for fast and scalable data analytics. The course also introduces cloud-based deployment strategies for Big Data applications.

### Prerequisites

No experience is required, but fundamental knowledge of any programming language would be helpful.

### Experts from Academia/Industry

#### Who Should Register?

Any Interested Faculty/PhD-Scholars  
UG/PG/ & Industry Persons can register

#### Registration Fee

Fees: ₹ 250/- Faculty/Research Scholar/ Students  
₹ 500/- Industry/Others

Note: Refund will be done in case of course cancellation only, within 20 working days

#### How to make Payment

Please make the payment first using the below link  
upload the payment receipt when filling out the  
Google registration form

<https://eict.iitr.ac.in/instruction-for-payment/>

**Course Code: EICTTTR-FDP-5H6-23**

#### Registration Link

<https://forms.gle/1Dtsir7fiExqjB7m9>



Scan QR for  
registration

**Register before:**  
July 20, 2025

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### Course Outcomes

- Write modular and efficient Python programs for data-centric tasks.
- Use Pandas and NumPy for manipulating and analyzing large datasets.
- Visualize data using modern Python libraries.
- Understand the architecture and working of Hadoop and its ecosystem tools.
- Develop and run distributed processing tasks using Apache Spark.
- Design and deploy Big Data solutions on cloud platforms.

### Focus Areas

- Programming foundations with Python.
- Numerical computing with Pandas and NumPy.
- Data visualization using Matplotlib, Plotly, and scikit-learn.
- Big Data architecture and the Hadoop ecosystem.
- Distributed data processing using Apache Spark and PySpark.
- Cloud-based applications for data analytics and processing.

### Course Features

- 40 Hours of Lectures, hands-on, and Pedagogy/Industry sessions.
- Lectures from Expert Speakers, Hands-on from industry/Academia experts.
- Access to learning material and video lectures
- Certificate by E&ICT Academy IIT Roorkee

### Who may benefit

- Academic Faculty and Students(UG/PG)
- Government Officials.
- Working Professionals in the Industry and Startups.
- Research Scientists and Technical Staff.



This certificate can be considered in alignment with other Quality Improvement Programs (QIP) as well as **NBA** and **NAAC** for recognition/credit.

### Principal Investigator

- Prof. Sanjeev Manhas, Head, ECE Department, IIT Roorkee

### Course Coordinators

- Prof. Sanjeev Manhas, Head, ECE Dept., IIT Roorkee
- Dr. Reena Srivastava, Dean CS Dept., BBD University Lucknow

### Reach Us:

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